

Abstract of the Disclosure

A magnetic position sensor has a stator (16', 36, 52) formed of magnetic material and a pair of magnets (14a, 14b; 34a, 34b; 54a, 54b; 64a, 64b) rotatably mounted about the stator and movable between opposite angular extremities and spaced from the stator by a primary cylindrical air gap (5). A secondary air gap (4) is formed in a stationary member at a location at which the magnetic field varies with the angular position of the magnets. A first Hall Effect sensor (18) is disposed in the secondary air gap to measure the magnetic field there-across as an indication of the angular position of the magnets. A second reference sensor (22) is provided to detect the magnetic decay of the magnets. The second sensor can be a Hall Effect sensor disposed at a location at which the magnetic field is relatively constant, independent of the angular position of the magnets. The reference sensor output can be used as a diagnostic indicator or as a correction for the first sensor output.